

# Appendix



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## Catalog notes

**Overview****Trademarks**

All product designations may be registered trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes may violate the rights of the owner.

**Amendments**

All technical data, dimensions and weights are subject to change without notice unless otherwise specified on the pages of this catalog.

**Dimensions**

All dimensions are in mm.

**Images**

The illustrations are not binding.

**Technical data**

The technical data in the catalog are for general information. The instruction manuals and the operating instructions on the products must be observed during assembly, operation and maintenance.

Further technical information is available at [www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)

- under Product List:
  - Technical specifications
- under Entry List:
  - Updates
  - Downloads
  - FAQ
  - Manuals
  - Operating instructions
  - Characteristic curves
  - Certificates

Configurators can be found at [www.siemens.com/lowvoltage/configurators](http://www.siemens.com/lowvoltage/configurators)

**Assembly, operation and maintenance**

The instruction manuals and the operating instructions on the products must be observed during assembly, operation and maintenance.

## Logistics

### General

With regard to delivery service, communications and environmental protection, our logistics service ensures "quality from the moment of ordering right through to delivery". By designing our infrastructure according to customer requirements and implementing electronic order processing, we have successfully optimized our logistics processes.

We are proud of our personal consulting service, on-time deliveries and 1-day transport within Germany.

**To this end, we supply the preferred types marked with ► ex works.**

We regard the ISO 9001 certification and consistent quality checks as an integral part of our services.

Electronic order processing is fast, cost-efficient and error-free. Please contact us if you want to benefit from these advantages.

### Packaging, packing units

The packaging in which our equipment is dispatched provides protection against dust and mechanical damage during transport, thus ensuring that all our products arrive in perfect condition.

We select our packaging for maximum environmental compatibility and reusability (e. g. crumpled paper instead of polystyrene chips for protection during transport in packages up to 32 kg) and, in particular, with a view to reducing waste.

With our multi-unit packaging and reusable packaging, we offer you specific types of packaging that are both kind to the environment and tailored to your requirements:

Your advantages at a glance:

- Lower order costs.
- Cost savings through uniform-type packaging: low/no disposal costs.
- Reduced time and cost thanks to short unpacking times.
- "Just-in-time" delivery directly to the production line helps reduce stock: cost savings through reduction of storage area.
- Fast assembly thanks to supply in sets.
- Standard Euro boxes - corresponding to the Euro pallet modular system - suitable for most conveyor systems.
- Active contribution to environmental protection.

Unless stated otherwise in the "Selection and ordering data" of this catalog, our products are supplied individually packed.

For small parts/accessories, we offer you economical packaging units as standard packs containing more than one item, e. g. 5, 10, 50 or 100 units. It is essential that whole number multiples of these quantities be ordered to ensure satisfactory quality of the products and problem-free order processing.

The products are delivered in a neutral carton. The label includes warning notices, the CE mark, the open arrow recycling symbol, and product description information in English and German. In addition to the Order No. (MLFB) and the number of items in the packaging, the Instr. Order No. is also specified for the operating instructions. It can be obtained from your local Siemens representative (you will find a list of your local Siemens representatives at [www.siemens.com/automation/partner](http://www.siemens.com/automation/partner)).

The device Order No. of most devices can also be acquired through the EAN barcode to simplify ordering and storage logistics.

The Order Nos. and EAN codes are assigned electronically in the master data of the products for low-voltage power distribution and electrical installation.

## Ordering notes

## Overview

## Ordering special versions

When ordering products that differ from the standard versions listed in the catalog, "-Z" must be added to the Order No. indicated and the required features must be specified using alpha-numeric order codes or plain text.

## Ordering very small quantities

When small orders are placed, the costs associated with order processing are greater than the order value. We therefore recommend that you combine several small orders. Where this is not possible, we regret that we are obliged to make a small processing charge: for orders with a net goods value of less than € 250 we charge an € 20 supplement to cover our order processing and invoicing costs.

## Explanations on the Selection and Ordering Data

## Delivery time class (DT)

| DT | Meaning        |
|----|----------------|
| ▶  | Preferred type |
| A  | Two workdays   |
| B  | One week       |
| C  | Three weeks    |
| D  | Six weeks      |
| X  | On request     |

Preferred types are device types that can be delivered immediately ex works, i. e. they are dispatched within 24 hours.

If ordered in normal quantities, the products are usually delivered within the specified delivery times, calculated from the date we receive your order.

In exceptional cases, delivery times may vary from those specified.

The delivery times are valid ex works from Siemens AG (products ready for dispatch).

Shipping times depend on the destination and the method of shipping. The standard shipping time for Germany is one day.

The specified delivery times are correct at the time of going to print and are subject to constant optimization. Up-to-date information can be found at [www.siemens.com/industrymail](http://www.siemens.com/industrymail).

## Price units (PU)

The price unit defines the number of units, sets or meters to which the specified price and weight apply.

## PS/P. unit (packaging size/packaging unit)

The packaging size / packaging unit defines the number, e. g. of units, sets or meters, for outer packaging.

- The **first digit** in the PS/P. unit column (packaging size/packaging unit) indicates the minimum order quantity. You can only order this specified quantity or a multiple thereof.
- The **second digit** in the PS/P. unit column (packaging size/packaging unit) specifies the number of units contained in larger packaging (e. g. in a carton). You must order this quantity or a multiple thereof if you want the item to be delivered in a larger packaging quantity.

Examples:

| PS/P. unit  | Meaning                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 unit      | You can order one item or a multiple thereof.                                                                                                                                                                                                                                                                                                                                                            |
| 5 units     | For example, five units are packed in a bag. Because the bags cannot be opened, you can only order a multiple of the quantity contained in the bag: 5, 10, 15, 20 etc.                                                                                                                                                                                                                                   |
| 5/100 units | One carton contains (for example) 20 bags, each containing 5 units, i. e. a total of 100 units. If only cartons are available for delivery, you need to order a multiple of the carton quantity: 100, 200, 300, etc.<br>Ordering a quantity of 220 units, would result in the following delivery: two cartons, each containing 100 units (= 200 units) and 4 bags, each containing 5 units (= 20 units). |
| 1 set       | A set comprises a defined number of different parts.                                                                                                                                                                                                                                                                                                                                                     |

## Price groups (PG)

Each product is allocated to a price group.

## Weight

The defined weight is the net weight in kg and refers to the price unit (PU).

## Examples

| DT          | Order No.                                             | Price per PU | PU (UNIT, SET, M) | PS/ P. unit | PG  | DT                                                                      | Order No.                              | Price per PU | PU (UNIT, SET, M) | PS/ P. unit | PG  |
|-------------|-------------------------------------------------------|--------------|-------------------|-------------|-----|-------------------------------------------------------------------------|----------------------------------------|--------------|-------------------|-------------|-----|
| ▶           | 8PQ4 000-1BA13                                        |              | 1                 | 1/10 units  | 155 | ▶                                                                       | 8GB4 378                               |              | 1                 | 1 set*      | 032 |
| DT:         | Preferred type                                        |              |                   |             |     | DT:                                                                     | Preferred type                         |              |                   |             |     |
| PU:         | One unit (on which price is based)                    |              |                   |             |     | PU:                                                                     | One set* (on which price is based)     |              |                   |             |     |
| PS/P. unit: | 1 = minimum order quantity / 10 = quantity per carton |              |                   |             |     | PS/P. unit:                                                             | The minimum order quantity is one set* |              |                   |             |     |
| PG:         | 155                                                   |              |                   |             |     | PG:                                                                     | 032                                    |              |                   |             |     |
|             |                                                       |              |                   |             |     | * The selection and ordering data specify the parts that make up a set. |                                        |              |                   |             |     |

## Low-voltage power distribution and electrical installations technology. The secrets of UL. You have our support.

Our products for low-voltage power distribution and electrical installation are designed not only for the IEC market. Numerous devices have both UL and IEC approval. This makes it easier for manufacturers of switchgear and controlgear assemblies to enter the North American market.

Exports to North America require special approvals which differ from the IEC directives. On the IEC market, directives define only the essential functions of a system. The technical details are not listed. By contrast, directives on the American market go into the details of how to carry out the installation work etc.

For OEMs and machine manufacturers it is important to know the main differences between the two technical worlds and to work together respectively with manufacturers and suppliers who have the right products and know-how.

Siemens is a strong partner in this case. Our know-how extends from the production of UL-approved devices to the wiring of control cabinets according to UL regulations.

These UL requirements are already taken into account when designing our devices for low-voltage power distribution and electrical installation. They are developed not only for the IEC market but also for the UL market.

We have been working with UL (Underwriters Laboratories Inc.®), the leading technical certification company in the USA, since 1969. We are also glad to share our knowledge with you in the form of training courses.

With our UL-certified products for low-voltage power distribution and electrical installation you are on the safe side and can build control cabinets according to UL standard easily and quickly.

This catalog contains UL-certified devices and systems from the SENTRON and ALPHA product families.



In addition to looking in this catalog you should also check out our Catalog LV 16 "Switching Devices and Components for Applications according to UL" for UL-specific products:

- SIRIUS 3RV17 and 3RV18 Circuit Breakers
- SENTRON protection, switching, measuring and monitoring devices
- ALPHA 8HP molded-plastic distribution systems
- ALPHA FIX Terminal Blocks

Take a look at our range of products and convince yourself. Or simply click on

[www.siemens.com/lowvoltage/ul-europa](http://www.siemens.com/lowvoltage/ul-europa)

Here, you will find information on for example UL standards, UL classification and a number of technical particularities of UL.

Under "UL Overview/Standards and Approvals" we provide a summary of the available products and product groups. A table lists the UL standards to which the products conform and contains links to the corresponding UL reports.

Under "Portfolio" we round off with a list of our most relevant products for low-voltage power distribution and electrical installation as well as for low-voltage controls (including links to the respective Internet product pages).

Simply click on the navigation bar and go on a UL discovery tour!

## ATEX explosion protection

### Overview

In many industries the production, processing, transport and storage of combustible substances are accompanied by escaping gases, vapor or spray which find their way into the environment. Other processes result in combustible dust. Together with the oxygen in the air, the result can be an explosive atmosphere which will explode if ignited.

Serious injury to persons and damage to property can result particularly in the chemical and petrochemical industry, mineral oil and natural gas production, mining, mills (e. g. grain, solid materials) and many other sectors.

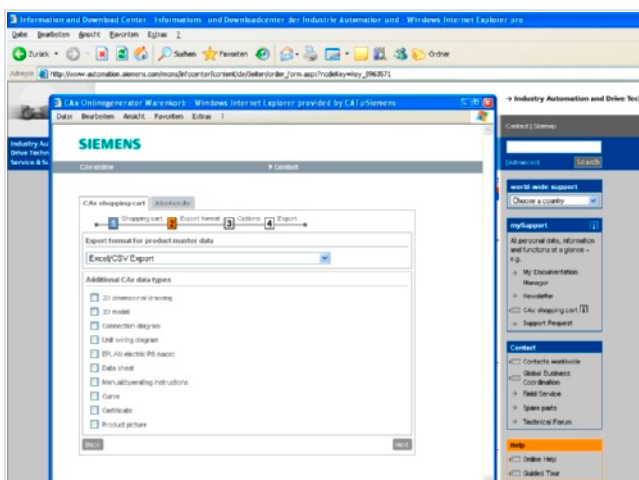
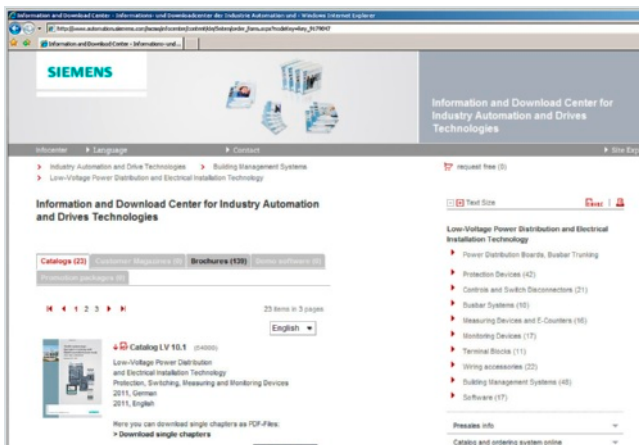
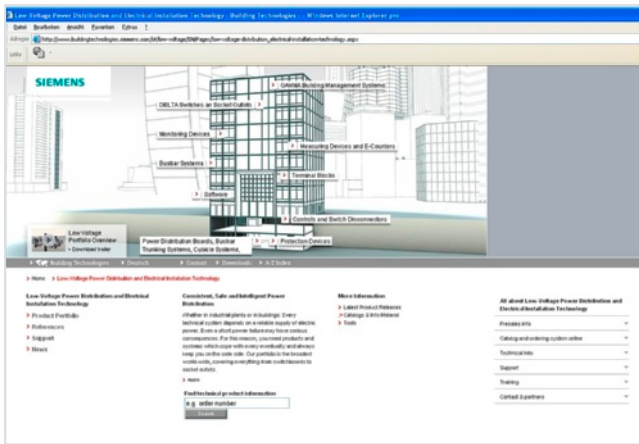
To guarantee the maximum possible safety in these areas, the legislators of most countries have drawn up requirements in the form of laws, regulations and standards. In the course of globalization, great progress has been made with regard to uniform directives for explosion protection.

With Directive 94/9/EC, the European Union laid the foundations for complete harmonization by requiring that all new devices as from 1st July 2003 have to be approved in accordance with this directive.

In this catalog, special attention is drawn to devices which comply with the ATEX Directive. However, it does not replace intensive study of the relevant fundamentals and directives when planning and installing electrical systems.



## Overview



We regard product support as just as important as the products and systems themselves.

Visit our site on the Internet for a comprehensive offering of support for low-voltage power distribution and electrical installation products, such as

- Operating instructions and manuals for direct download
- Online registration for seminars and events
- Up-to-date answers to your queries and problems
- Software upgrades and updates for fast download
- Telephone assistance in more than 190 countries
- Photos and graphics for external use

and much more - all conveniently and easily accessible.

Address:

[www.siemens.com/lowvoltage](http://www.siemens.com/lowvoltage)

You will find regularly updated information material such as catalogues, customer magazines, brochures and trial versions of software for low-voltage power distribution and electrical installation on the Internet at:

[www.siemens.com/lowvoltage/infomaterial](http://www.siemens.com/lowvoltage/infomaterial)

Here, you can order your copy of the available documentation or download it in common file formats (PDF, ZIP).

For your configuration systems we can provide technical and graphic data in electronic form for the range of low-voltage power distribution and electrical installation products:

#### CAx online generator

For the further processing of low-voltage power distribution and electrical installation products in CAE/CAD systems the online generator provides:

- Technical product master data in CSV and Excel format
- Graphic product data
  - 2D dimensional drawings in DXF format (other formats optional)
  - 3D models in STEP format
  - Internal circuit diagrams
  - EPLAN electric P 8 macros
- Documentation in the form of PDF files
  - Product data sheets
  - Manuals
  - Operating instructions
  - Characteristic curves
  - Certificates
- Product photos
- Texts for tenders in GAEB and Text format.

[www.siemens.com/cax](http://www.siemens.com/cax)

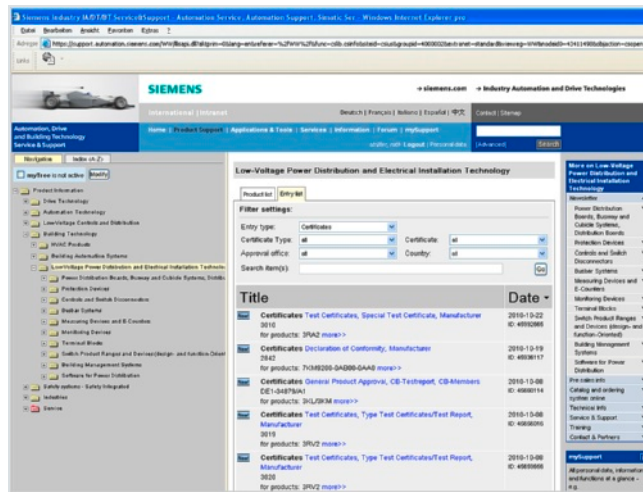
## Overview

The products and systems listed in this catalog are marketed using a VDE-approved quality management system according to ISO 9001.

Siemens AG  
Infrastructure & Cities Sector  
Low and Medium Voltage Division  
Low Voltage  
Reg. No.: 40017/QM/03.06

Information on the certificates available (CE, UL, CSA, FM, shipping authorizations) for low-voltage power distribution and electrical installation products can be found on the Internet at:

In the Entry List you can use the certificate type (general product approval, explosion protection, test certificates, shipbuilding,...) as a filter criterion.

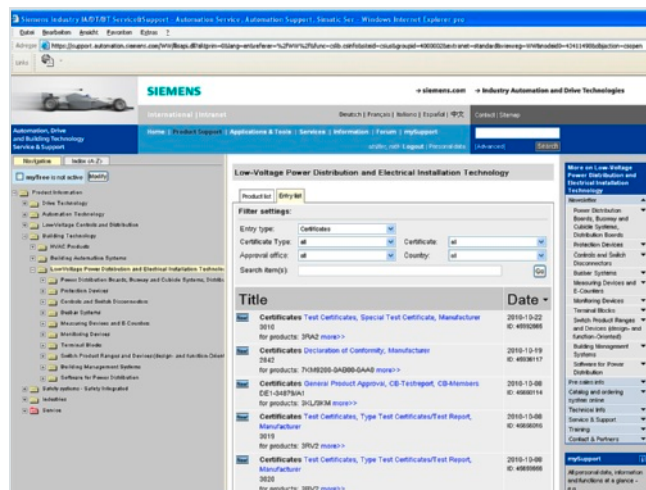


## Overview

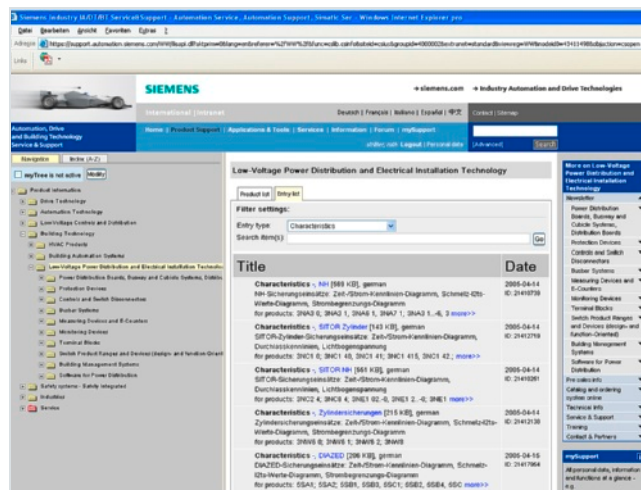
## Approvals, test certificates, characteristic curves

An overview of the certificates available for low-voltage power distribution and electrical installation products along with more technical documentation can be consulted daily on the Internet at:

[www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)



Product support: Approvals / Certificates



Product support: Characteristic curves

## Product standards (excerpt)

| IEC       | EN        | DIN VDE | Title                                                                                                                                                                                                                                                                              |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 60044-1   | 60044-1   | --      | Instrument Transformers - Part 1: Current Transformers                                                                                                                                                                                                                             |
| 60050-441 | --        | --      | International Electrotechnical Vocabulary. Switchgear, controlgear and fuses                                                                                                                                                                                                       |
| 60076-11  | 60076-11  | --      | Power transformers - Part 11: Dry-type transformers                                                                                                                                                                                                                                |
| 60079-14  | 60079-14  | --      | Explosive atmospheres - Part 14: Electrical installations design, selection and erection                                                                                                                                                                                           |
| 60079-2   | 60079-2   | --      | Explosive atmospheres - Part 2: Equipment protection by pressurized enclosures 'p'                                                                                                                                                                                                 |
| 60204-1   | 60204-1   | --      | Safety of machinery - Electrical equipment of machines - Part 1: General requirements                                                                                                                                                                                              |
| 60269-1   | 60269-1   | --      | Low-voltage fuses                                                                                                                                                                                                                                                                  |
| 60269-4   | 60269-4   | --      | • Part 1: General requirements<br>• Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices                                                                                                                                                  |
| 60439-1   | 60439-1   | --      | Low-voltage switchgear and controlgear assemblies                                                                                                                                                                                                                                  |
| 60439-3   | 60439-3   | --      | • Part 1: Type-tested and partially type-tested assemblies<br>• Part 3: Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use - Distribution boards                   |
| 60664-1   | 60664-1   | --      | Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests                                                                                                                                                                      |
| 60947-1   | 60947-1   | --      | Low-voltage switchgear and controlgear                                                                                                                                                                                                                                             |
| 60947-2   | 60947-2   | --      | • Part 1: General rules                                                                                                                                                                                                                                                            |
| 60947-3   | 60947-3   | --      | • Part 2: Circuit-breakers<br>• Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units                                                                                                                                                                   |
| 60947-4-1 | 60947-4-1 | --      | • Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters                                                                                                                                                                                        |
| 60947-4-2 | 60947-4-2 | --      | • Part 4-2: Contactors and motor-starters - AC semiconductor motor controllers and starters                                                                                                                                                                                        |
| 60947-4-3 | 60947-4-3 | --      | • Part 4-3: Contactors and motor-starters - AC semiconductor controllers and contactors for non-motor loads                                                                                                                                                                        |
| 60947-5-1 | 60947-5-1 | --      | • Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                                                                                                                                                                             |
| 60947-5-2 | 60947-5-2 | --      | • Part 5-2: Control circuit devices and switching elements - Proximity switches                                                                                                                                                                                                    |
| 60947-5-3 | 60947-5-3 | --      | • Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions                                                                                                                                      |
| 60947-5-5 | 60947-5-5 | --      | • Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function                                                                                                                                                    |
| 60947-5-6 | 60947-5-6 | --      | • Part 5-6: Control circuit devices and switching elements - DC interface for proximity sensors and switching amplifiers (NAMUR)                                                                                                                                                   |
| 60947-5-7 | 60947-5-7 | --      | • Part 5-7: Control circuit devices and switching elements - Requirements for proximity devices with analogue output                                                                                                                                                               |
| 60947-5-8 | 60947-5-8 | --      | • Part 5-8: Control circuit devices and switching elements - Three-position enabling switches                                                                                                                                                                                      |
| 60947-5-9 | 60947-5-9 | --      | • Part 5-9: Control circuit devices and switching elements - Flow rate switches                                                                                                                                                                                                    |
| 60947-6-1 | 60947-6-1 | --      | • Part 6-1: Multiple function equipment - Transfer switching equipment                                                                                                                                                                                                             |
| 60947-6-2 | 60947-6-2 | --      | • Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)                                                                                                                                                                            |
| 60947-7-1 | 60947-7-1 | --      | • Part 7-1: Ancillary equipment - Terminal blocks for copper conductors                                                                                                                                                                                                            |
| 60947-7-2 | 60947-7-2 | --      | • Part 7-2: Ancillary equipment - Protective conductor terminal blocks for copper conductors                                                                                                                                                                                       |
| 60947-7-3 | 60947-7-3 | --      | • Part 7-3: Ancillary equipment - Safety requirements for fuse terminal blocks                                                                                                                                                                                                     |
| 60947-8   | 60947-8   | --      | • Part 8: Control units for built-in thermal protection (PTC) for rotating electrical machines                                                                                                                                                                                     |
| 60999-1   | 60999-1   | --      | Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0.2 mm <sup>2</sup> up to 35 mm <sup>2</sup> (included) |

## Standards and approvals

| IEC                                 | EN                                  | DIN VDE                                            | Title                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|-------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 61000-4-1<br>61000-6-3<br>61000-6-4 | 61000-4-1<br>61000-6-3<br>61000-6-4 | --                                                 | Electromagnetic compatibility (EMC)<br>• Part 4-1: Testing and measurement techniques - Overview of IEC 61000-4 series<br>• Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments<br>• Part 6-4: Generic standards - Emission standard for industrial environments |
| 61140                               | 61140                               | --                                                 | Protection against electric shock - Common aspects for installation and equipment                                                                                                                                                                                                                                          |
| 61439-1<br>61439-2                  | 61439-1<br>61439-2                  | 0660-600-1<br>0660-600-2                           | Low-voltage switchgear and controlgear assemblies<br>• Part 1: General rules<br>• Part 2: Power switchgear and controlgear assemblies                                                                                                                                                                                      |
| 61558-1                             | 61558-1                             | 0570-1 <sup>1)</sup>                               | Safety of power transformers, power supplies, reactors and similar products<br>• Part 1: General requirements and tests                                                                                                                                                                                                    |
| 61558-2-1                           | 61558-2-1                           | 0570-2-1 <sup>1)</sup>                             | • Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications                                                                                                                                                                |
| 61558-2-2                           | 61558-2-2                           | 0570-2-2 <sup>1)</sup>                             | • Part 2-2: Particular requirements and tests for control transformers and power supplies incorporating control transformers                                                                                                                                                                                               |
| 61558-2-4                           | 61558-2-4                           | 0570-2-4 <sup>1)</sup>                             | • Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers                                                                                                                                                                                       |
| 61558-2-6                           | 61558-2-6                           | 0570-2-6 <sup>1)</sup>                             | • Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers                                                                                                                                                                         |
| 61558-2-9                           | 61558-2-9                           | 0570-2-9 <sup>1)</sup>                             | • Part 2-9: Particular requirements and tests for transformers and power supply units for class III handlamps for tungsten filament lamps                                                                                                                                                                                  |
| 61558-2-12                          | 61558-2-12                          | 0570-2-12 <sup>1)</sup>                            | • Part 2-12: Particular requirements and tests for constant voltage transformers and power supply units for constant voltage                                                                                                                                                                                               |
| 61558-2-13                          | 61558-2-13                          | 0570-2-13 <sup>1)</sup>                            | • Part 2-13: Particular requirements and tests for auto transformers and power supply units incorporating auto transformers                                                                                                                                                                                                |
| 61558-2-15<br>61558-2-20            | 61558-2-15<br>61558-2-20            | 0570-2-15 <sup>1)</sup><br>0570-2-20 <sup>1)</sup> | • Part 2-15: Particular requirements and tests for isolating transformers for the supply of medical locations<br>• Part 2-20: Particular requirements and tests for small reactors                                                                                                                                         |
| 61641                               | --                                  | --                                                 | Enclosed low-voltage switchgear and controlgear assemblies - Guide for testing under conditions of arcing due to internal fault                                                                                                                                                                                            |
| 61810-1<br>61812-1                  | 61810-1<br>61812-1                  | --                                                 | Electromechanical elementary relays - Part 1: General requirements<br>Time relays for industrial and residential use - Part 1: Requirements and tests                                                                                                                                                                      |
| 62026-2                             | 50295                               | --                                                 | Low-voltage switchgear and controlgear - Controller-device interfaces (CDIs) - Part 2: Actuator sensor interface (AS-I)                                                                                                                                                                                                    |
| 62041                               | 62041                               | 0570-10 <sup>1)</sup>                              | Safety of transformers, reactors, power supply units and combinations thereof - EMC requirements                                                                                                                                                                                                                           |
| --                                  | 50178                               | --                                                 | Equipment of electrical power installations with electronic equipment                                                                                                                                                                                                                                                      |
| --                                  | 50274                               | --                                                 | Low-voltage switchgear assemblies - Protection from electric shock - Protection from accidental touching of dangerous active parts                                                                                                                                                                                         |
| --                                  | --                                  | 0552                                               | Standards for variable-ratio transformers with moving contacts perpendicular to the coiling direction                                                                                                                                                                                                                      |

<sup>1)</sup> VDE classification.

| UL                        | CSA C22.2            | ASME                 | JIS                  | Title                                                                                                                                                                                  |
|---------------------------|----------------------|----------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 506<br>508<br>489<br>1012 | --<br>--<br>--<br>-- | --<br>--<br>--<br>-- | --<br>--<br>--<br>-- | Specialty transformers<br>Industrial control equipment<br>Molded case circuit breakers, molded case switches and circuit breaker enclosures<br>Power units other than CLASS 2          |
| 1561<br>5085<br>60601-1   | --<br>--<br>--       | --<br>--<br>--       | --<br>--<br>--       | Dry-type general purpose and power transformers<br>Low-voltage transformers<br>Medical electrical equipment, Part 1: General requirements for safety (IEC 60601, EN 60601, VDE 0750-1) |
| 1604<br>1059<br>486A-486B | --<br>--<br>--       | --<br>--<br>--       | --<br>--<br>--       | Electrical equipment for use in CLASS I and II, Division 2 and CLASS III hazardous (Classified) locations<br>Terminal blocks<br>Wire connectors                                        |
| 486E                      | --                   | --                   | --                   | Equipment wiring terminals for use with aluminum and/or copper conductors                                                                                                              |
| 50                        | --                   | --                   | --                   | Enclosures for electrical equipment. Non-environmental considerations                                                                                                                  |
| --                        | No. 66               | --                   | --                   | Specialty transformers                                                                                                                                                                 |
| --                        | No. 14               | --                   | --                   | Industrial control equipment                                                                                                                                                           |
| --                        | No. 5                | --                   | --                   | Molded case circuit breakers, molded case switches and circuit breaker enclosures                                                                                                      |
| --                        | No. 107-1            | --                   | --                   | General use power supplies                                                                                                                                                             |
| --                        | --                   | A17.5 / B 44.1       | --                   | Elevator and escalator electrical equipment                                                                                                                                            |
| --                        | --                   | --                   | C 8201-4-1           | Low-voltage switchgear and controlgear; Contactors and motor-starters                                                                                                                  |

## Approval requirements valid in different countries

Siemens low-voltage switchgear and controlgear are designed, manufactured and tested according to the relevant German standards (DIN and VDE), IEC publications and European standards (EN) as well as CSA and UL standards. The standards assigned to the single devices are stated in the relevant parts of this catalog.

As far as is economically viable, in addition to the pertinent VDE, EN and IEC standards, the requirements of the various regulations valid in other countries are also taken into account in the design of the equipment.

In some countries (see table below), an approval is required for certain low-voltage switchgear and controlgear components. Depending on the market requirements, these devices have been submitted for approval to the authorized testing institutes.

In some cases, CSA for Canada and UL for the USA only approve special switchgear versions. Such special versions are listed separately from the standard versions in the individual parts of this catalog.

For this equipment, partial limitations of the maximum permissible voltages, currents and rated outputs can be imposed, or special approval and, in some cases, special identification is required.

For use on board ship, the specifications of the marine classification societies must be observed (see table below). In some cases, they require type tests of the components to be approved.

[The present state of approval is shown in the "Type overview of approved devices" tables on page 20/12.](#)

## Standards and approvals

## Testing bodies, approval identification and approval requirements

|                                                                       | Canada <sup>1)</sup>                                                                                                                                                                                                                   | USA <sup>1)</sup>                                                                 | China                                                                               |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Government-appointed or private, officially recognized testing bodies | CSA UL (USA)                                                                                                                                                                                                                           | UL                                                                                | CQC                                                                                 |
| Approval symbol                                                       |                                                                                                                                                       |  |  |
| Approval requirements                                                 | +                                                                                                                                                                                                                                      | +                                                                                 | +                                                                                   |
| Remarks                                                               | UL and CSA are authorized to grant approvals according to Canadian or US regulations. Please note: These approvals are frequently not recognized and additional approval often has to be obtained from the national testing authority. |                                                                                   | CCC                                                                                 |

For more information about UL and CSA see 20/11.

<sup>1)</sup> For guide numbers and file numbers for the approvals, visit our website at [www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)

## Marine classification societies

|       | Germany            | United Kingdom              | France         | Norway             | CIS                                   | Italy                    | Poland                 | USA                         |
|-------|--------------------|-----------------------------|----------------|--------------------|---------------------------------------|--------------------------|------------------------|-----------------------------|
| Name  | Germanischer Lloyd | Lloyds Register of Shipping | Bureau Veritas | Det Norske Veritas | Russian Maritime Register of Shipping | Registro Italiano Navale | Polski Rejestr Statków | American Bureau of Shipping |
| Codes | GL                 | LRS                         | BV             | DNV                | RMRS                                  | RINA                     | PRS                    | ABS                         |

## CE marking

Manufacturers of products which fall within the scope of EC directives must identify their products, operating instructions or packaging with a CE mark.

The CE mark confirms that a product fulfills the appropriate basic requirements of all pertinent directives. The mark is a mandatory requirement for putting products into circulation throughout the EC.

All the products in this catalog are in conformance with the EC directives and bear the CE mark.

- Low-voltage directive
- EMC directive
- Machinery directive
- Ex protection directive

The CE mark of conformity: .

## Accident prevention

Test certificates and approvals from the BIA (German statutory industrial accident insurance institution in Bonn) and from SUVA (Swiss institute for accident prevention) are available for some devices in safety control systems. For details, see the respective product descriptions.

## Special standards, for example the USA and Canada

In the USA and Canada, for machine tools and processing machines in particular, supply lines are laid using rubber insulated cable enclosed in heavy-duty steel piping similar to that used for gas or water pipe systems.

The tubing system must be completely watertight and electrically conductive (especially sleeving and elbows). Since the tubing system can also be grounded, the cable entries of enclosed units equipped with heavy-gauge or metric threads must be fitted with metal adapters between these threads and the tube thread. The necessary adapters are specified for the switchgear as accessories; they should be ordered separately unless otherwise specified.

Low-voltage switchgear and controlgear for auxiliary circuits (e.g. contactor relays, commanding and signaling devices and auxiliary switches/auxiliary contacts in general) are generally only approved by CSA and UL for **"Heavy Duty"** or **"Standard Duty"** and are identified either with these specifications in addition to the maximum permissible voltage or by using an abbreviation.

The abbreviations are harmonized with IEC 60947-5-1 Appendix 1 Table A.1 and correspond to the stated utilization categories.

For various switching devices detailed in the catalog, a note has been included to the effect that, above a certain voltage, the auxiliary switches/auxiliary contacts can only be used if they have the same polarity. This means that the input terminals can only be connected to the same pole of the control voltage, e. g. "600 V AC above 300 V AC same polarity".

## Standards and approvals

## Different features of UL approvals (for USA and Canada)

| Recognized Component                                                                                                                                                                                                                                                                                                                                                                                                                               | Listed Product                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Devices are identified on the rating plate using the "UL recognition mark":<br>USA:  c  US<br>Canada: c   US   | Devices are identified using the "UL listing mark" on the rating plate<br>e. g. USA:  LISTED 165 C Canada: c  LISTED 165 C<br>IND. CONT. EQ. IND. CONT. EQ.<br>(165 C stands for: Siemens, I IA CD Division, Amberg plant) |
| Devices are approved as modules for "factory wiring", i. e.:<br>as devices for installation in control systems, which are selected, installed, wired and tested entirely by trained personnel in factories, workshops or elsewhere, <b>according to the operating conditions</b> .                                                                                                                                                                 | Devices are approved for "field wiring", i. e.:<br><ul style="list-style-type: none"> <li>As devices for installation in control systems, which are completely wired by trained personnel in factories, workshops or elsewhere.</li> <li>As single devices for sale in retail outlets in the USA/Canada.</li> </ul>                                                                            |
| If devices are  or c  approved as "listed products", they are also approved as  or c  "recognized components". |                                                                                                                                                                                                                                                                                                                                                                                                |

For more information about UL and CSA see 20/10.

## Special standards, for example Russia, Australia and China

## GOST approval for Russia



A GOST approval is required for all products that are to be sold in Russia. The GOST mark has been obligatory on the packaging of all devices since mid-1998.

All devices delivered to any part of the Russian Federation must have this customs certification.

## CCC approval



Since August 1, 2003, CCC approval is required for many products that are marketed in China.

## C-Tick approval for Australia



The C-Tick approval is required for marketing Siemens devices in Australia. Electronic devices must provide proof of EMC clearance in Australia, similar to the CE mark of conformity laid down by the EMC directive applicable in the EC and bear the "C-Tick" mark. These requirements have been in force since October 1st, 1999.

## Type overview of approved devices

## Chapter 18 · ALPHA 8HP Molded-Plastic Distribution Systems

| Type | Approvals                                                                           |                                                                                          |                                                                                     |                                                                                          |                                                                                     | Marine classifications |        |         |                |        |        |      |       |        |     |
|------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|--------|---------|----------------|--------|--------|------|-------|--------|-----|
|      | Canada<br>1) 2)                                                                     | USA<br>1)                                                                                |                                                                                     |                                                                                          |                                                                                     | China                  | Russia | Germany | United Kingdom | France | Norway | CIS  | Italy | Poland | USA |
|      |  | c  US |  | c  US |  | CCC                    | GOST   | GL      | LRS            | BV     | DNV    | RMRS | RINA  | PRS    | ABS |

## Distribution systems

8HP20

- + Standard version approved.  
-- Not yet submitted for approval.

Further certifications and approvals available on request.

1) For guide numbers and file numbers for approvals, please visit [www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support) and select "Product Support".

2) c  and c  approvals are available in accordance with US approval.

## Chapter 19 · 8WH6 iPo installation terminals

| Type            | Approvals                                                                           |                                                                                          |                                                                                     |                                                                                          |                                                                                     |       |                     |               |             |              | Marine classifications |                   |        |        |      |       |        |     |
|-----------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|---------------------|---------------|-------------|--------------|------------------------|-------------------|--------|--------|------|-------|--------|-----|
|                 | Canada                                                                              |                                                                                          | USA                                                                                 |                                                                                          |                                                                                     | China | Czech Re-<br>public | Slova-<br>kia | Pol-<br>and | Hun-<br>gary | Germany                | United<br>Kingdom | France | Norway | CIS  | Italy | Poland | USA |
|                 |  | c  US |  | c  US |  | CCC   | EZU                 | SKTC          | SEP         | MEEI         | GL                     | LRS               | BV     | DNV    | RMRS | RINA  | PRS    | ABS |
| Terminal blocks |                                                                                     |                                                                                          |                                                                                     |                                                                                          |                                                                                     |       |                     |               |             |              |                        |                   |        |        |      |       |        |     |

## Terminal blocks

8WH

[www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)

## Standards and approvals

## Special standards in different countries

**Argentina**

In Argentina, the approval requirements are based on Resolution 92/98. Since April 1st, 2001, circuit breakers and RCCBs require approval.

Since April 1st, 2002, protective switches up to  $I_n = 63$  A and  $U_{max} = 440$  V require approval and must bear a mark of conformity.

**CCC approval for China****A003617**

Since August 1, 2003, CCC approval is required for all products that are marketed in China.

**Romania**

In Romania, components which are used in public buildings must be approved by the Romanian testing authority ICECON.

**GOST approval for Russia**

A GOST approval is required for all products that are to be sold in Russia. The GOST mark has been obligatory on the packaging of all devices since mid-1998.

All devices delivered to any part of the Russian Federation must have this customs certification.

**South Africa**

In South Africa there are approval requirements for circuit breakers and busbar trunking systems. Such equipment must bear a conformity mark.

## Country-specific approvals

|                                | Canada | USA | Romania | Russia <sup>1)</sup> ,<br>CIS | Turkey | Ukraine      | China      | South Africa |
|--------------------------------|--------|-----|---------|-------------------------------|--------|--------------|------------|--------------|
|                                | CSA    | UL  | ICECON  | GOST-R                        | TSE    | Ukraine-GOST | CCC        | SABS         |
| <b>Busbar trunking systems</b> |        |     |         |                               |        |              |            |              |
| CD-K system                    | --     | --  | --      | +                             | --     | +            | On request | --           |
| BD01 system                    | --     | --  | --      | +                             | --     | +            | On request | --           |
| BD2 system                     | --     | --  | --      | +                             | --     | +            | On request | --           |
| LD system                      | --     | --  | --      | +                             | --     | +            | +          | --           |
| LX system                      | --     | --  | --      | +                             | --     | +            | --         | --           |
| LR system                      | --     | --  | --      | +                             | --     | +            | --         | --           |

+ = certified or licensed

<sup>1)</sup> In Russia, the BD2, LD and LX systems also passed the fire barrier test (Poshtest).

## Approvals issued by marine classification societies

|                                | Germany            | France         | United Kingdom              | Italy                    | Norway             | Poland                 | Russia, CIS                           | USA                         |
|--------------------------------|--------------------|----------------|-----------------------------|--------------------------|--------------------|------------------------|---------------------------------------|-----------------------------|
|                                | Germanischer Lloyd | Bureau Veritas | Lloyds Register of Shipping | Registro Italiano Navale | Det Norske Veritas | Polski Rejestr Statków | Russian Maritime Register of Shipping | American Bureau of Shipping |
|                                | GL                 | BV             | LRS                         | RINA                     | DNV                | PRS                    | RMRS                                  | ABS                         |
| <b>Busbar trunking systems</b> |                    |                |                             |                          |                    |                        |                                       |                             |
| CD-K system                    | --                 | --             | --                          | --                       | On request         | --                     | --                                    | --                          |
| BD01 system                    | --                 | +              | +                           | --                       | +                  | --                     | --                                    | --                          |
| BD2 system                     | --                 | +              | +                           | --                       | +                  | --                     | --                                    | --                          |
| LD system                      | --                 | +              | +                           | --                       | +                  | --                     | --                                    | --                          |
| LX system                      | --                 | --             | --                          | --                       | --                 | --                     | --                                    | --                          |
| LR system                      | --                 | --             | --                          | --                       | --                 | --                     | --                                    | --                          |

+ = certified or licensed

## More information

You can find more information about standards and approvals at [www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)

If you have any questions concerning UL/CSA approvals, contact Technical Support, Tel.: +49 (911) 8957222.

## Standards and approvals

**ALPHA distribution boards**

Our ALPHA distribution boards and components are series produced. Regular type tests and routine tests, by both internal and external testing laboratories, ensure uniform quality and the highest technical standards. Our product spectrum ranges from small distribution boards with max. 63 A through to distribution boards with max. 1,250 A busbar load capacity.

The ALPHA distribution boards comply with standards EN 60439-1 (VDE 0660-500) and EN 60439-3 (VDE 0660-504). Our distribution boards are also tested according to the new standard IEC 61439-1 and -2 and certified accordingly with type verification.



You can find more information about approvals and certificates at [www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)

|                                                              | VDE                  | EN                                         | DIN | IEC                                           |
|--------------------------------------------------------------|----------------------|--------------------------------------------|-----|-----------------------------------------------|
| <b>ALPHA distribution boards</b>                             |                      |                                            |     |                                               |
| ALPHA 160 <sup>1)</sup>                                      | DIN VDE 0660-500/504 | EN 60439-1/-3                              | --  | IEC 60439-1/-3                                |
| ALPHA 400                                                    | DIN VDE 0660-500/504 | EN 61439-1/-2                              | --  | IEC 61439-1/-2                                |
| ALPHA 630                                                    | DIN VDE 0660-500/504 | EN 61439-1/-2                              | --  | IEC 61439-1/-2                                |
| <b>ALPHA small distribution boards</b>                       |                      |                                            |     |                                               |
| SIMBOX XL flush-mounting and hollow-wall distribution boards | DIN VDE 0603-1       | --                                         | --  | --                                            |
| SIMBOX XL surface-mounting distribution boards IP30          | DIN VDE 0603-1       | --                                         | --  | --                                            |
| SIMBOX WP surface-mounting distribution boards IP65          | --                   | EN 60439-1/-3                              | --  | IEC 60439-1/-3                                |
| <b>ALPHA 8HP molded-plastic distribution systems</b>         |                      |                                            |     |                                               |
| ALPHA 8HP molded-plastic distribution systems                | DIN VDE 0660-500     | EN 60439-1                                 | --  | IEC 60439-1                                   |
| <b>ALPHA modular distribution boards</b>                     |                      |                                            |     |                                               |
| ALPHA AS modular distribution boards                         | DIN VDE 0660-500/504 | TSK certificate according to EN 60439-1/-3 | --  | Type verification according to IEC 61439-1/-2 |

<sup>1)</sup> EN 60439-3 only applies to modular installation devices acc. to EN 43880.

## Contact partners at Siemens Industry



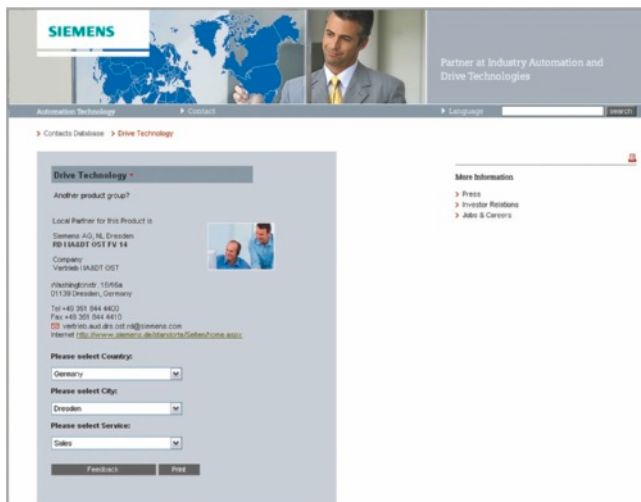
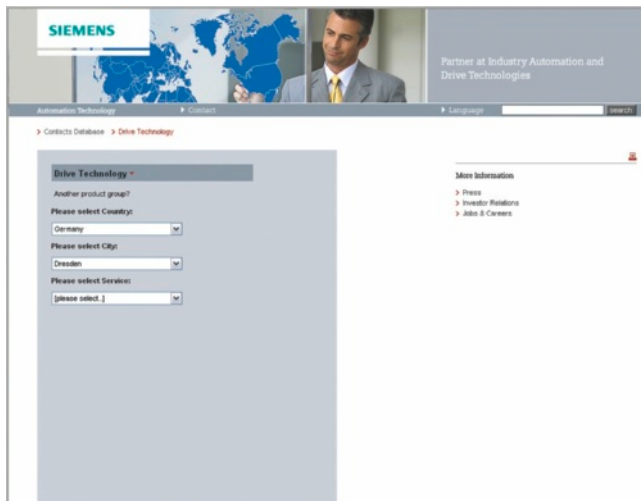
At Siemens Industry, more than 85 000 people are resolutely pursuing the same goal: long-term improvement of your competitive ability. We are committed to this goal. Thanks to our commitment, we continue to set new standards. In all industries – worldwide.

At your service locally, around the globe for consulting, sales, training, service, support, spare parts ... on the entire Siemens Industry range.

Your personal contact can be found in our Contacts Database at: [www.siemens.com/automation/partner](http://www.siemens.com/automation/partner)

You start by selecting a

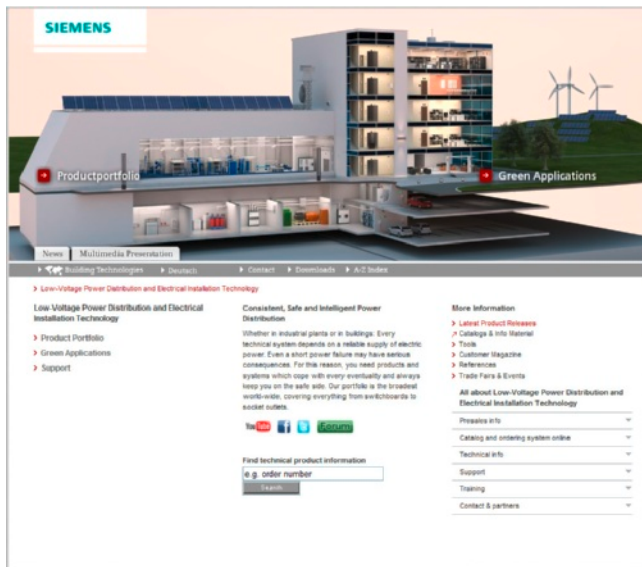
- Product group,
- Country,
- City,
- Service.



# Appendix Online Services

Information and Ordering  
in the Internet and on DVD

## Low-Voltage Power Distribution and Electrical Installation Technology on the WWW

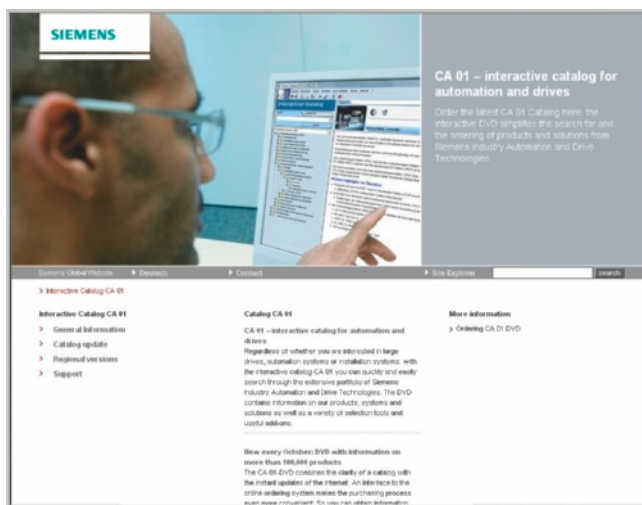


Siemens low-voltage power distribution and electrical installation technology offers switchboards, busbar trunking systems, distribution boards as well as protection, switching, measuring and monitoring devices, building management systems, switches and socket outlets. The consistency, modularity and intelligence of our components and systems offer you numerous advantages – throughout their service life and wherever you are in the world. We deliver trendsetting designs and innovative functions in unique quality, developed in accordance with the applicable international standards.

Comprehensive information about all products and systems as well as service and support is available in a compact and clear format on the Internet at:

[www.siemens.com/lowvoltage](http://www.siemens.com/lowvoltage)

## Product selection using the interactive catalog CA 01 of Industry



Detailed information together with convenient interactive functions:

The interactive catalog CA 01 covers more than 80 000 products and thus provides a full summary of the Siemens Industry Automation and Drive Technologies product base.

Here you will find everything that you need to solve tasks in the fields of automation, switchgear, installation and drives. All information is linked into a user interface which is easy to work with and intuitive.

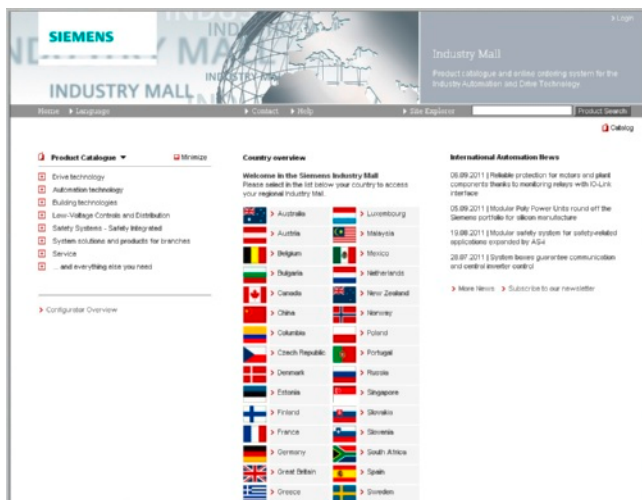
After selecting the product of your choice you can order at the press of a button, by fax or by online link.

Information on the interactive catalog CA 01 can be found on the Internet under

[www.siemens.com/automation/ca01](http://www.siemens.com/automation/ca01)

or on DVD.

## Easy Shopping with the Industry Mall



The Industry Mall is the virtual department store of Siemens AG on the Internet. Here you have access to a huge range of products presented in electronic catalogs in an informative and attractive way.

Data transfer via EDIFACT allows the whole procedure from selection through ordering to tracking of the order to be carried out online via the Internet.

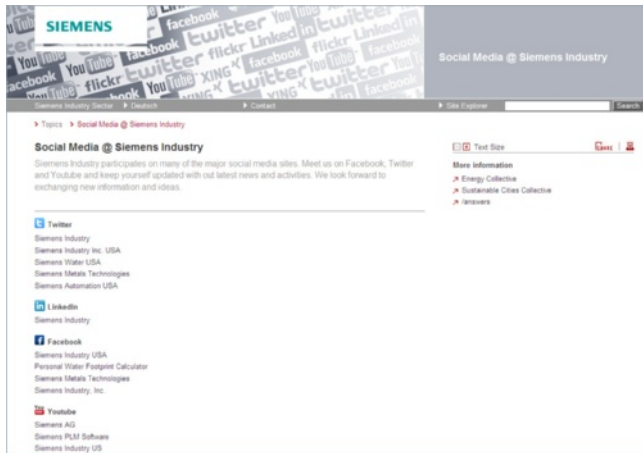
Numerous functions are available to support you.

For example, powerful search functions make it easy to find the required products, which can be immediately checked for availability. Customer-specific discounts and preparation of quotes can be carried out online as well as order tracking and tracing.

Please visit the Industry Mall on the Internet under:

[www.siemens.com/industrymall](http://www.siemens.com/industrymall)

## Social Media



Connect with Siemens through social media: visit our social networking sites for a wealth of useful information, demos on products and services, the opportunity to provide feedback, to exchange information and ideas with customers and other Siemens employees, and much, much more. Stay in the know and follow us on the ever-expanding global network of social media.

Connect with Siemens Industry at our central access point:

[www.siemens.com/industry/socialmedia](http://www.siemens.com/industry/socialmedia)

Or via our product pages at:

[www.siemens.com/automation](http://www.siemens.com/automation)

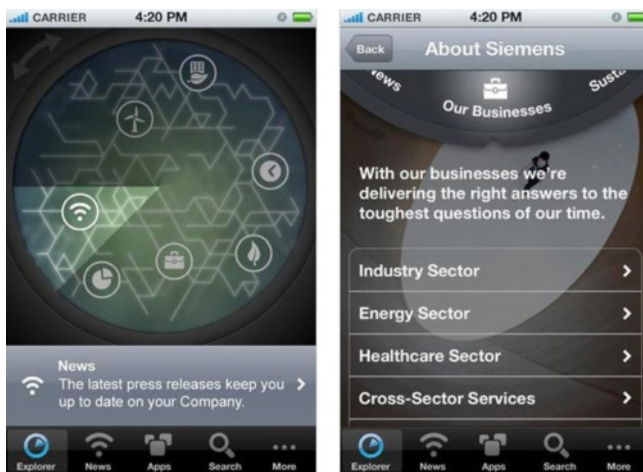
or

[www.siemens.com/drives](http://www.siemens.com/drives)

To find out more about Siemens' current social media activities visit us at:

[www.siemens.com/socialmedia](http://www.siemens.com/socialmedia)

## Mobile Media

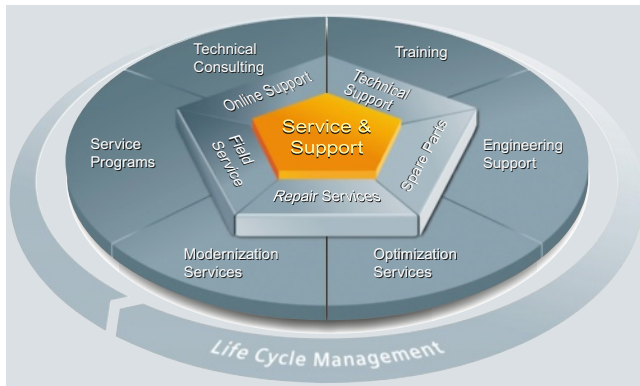


We are also constantly expanding our offering of cross-platform apps for smartphones and tablets. You will find the current Siemens apps at your app store.

# Appendix

## Service & Support

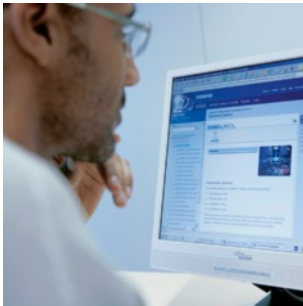
The unmatched complete service for the entire life cycle



Our Service & Support are available worldwide to help you with every aspect of Siemens Building and Automation Technologies. We offer on-site support for every phase of the life cycle of your buildings and plants in more than 100 countries.

Every step of the way, you have access to an experienced team of specialists and their combined expertise. Thanks to regular training and the close cooperation of key employees around the globe, we are able to offer reliable services for a huge range of options.

### Online support



Our comprehensive online information platform covers every aspect of our Service & Support and is available whenever, wherever.

[www.siemens.com/lowvoltage/support](http://www.siemens.com/lowvoltage/support)

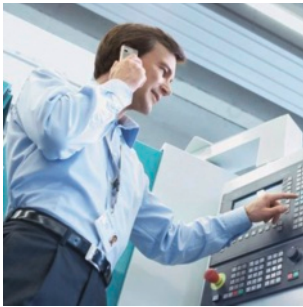
### Field Service



Siemens Field Service offers support with all aspects of commissioning and maintenance – so that the availability of your machines and plants is assured whatever the case.

[www.siemens.com/lowvoltage/technical-support](http://www.siemens.com/lowvoltage/technical-support)

### Technical support



The competent consulting service for technical issues with a broad range of customer-oriented services for all our products and systems.

[www.siemens.com/lowvoltage/technical-support](http://www.siemens.com/lowvoltage/technical-support)

### Spare parts



Plants and systems in all sectors worldwide are expected to meet ever higher levels of availability. We can help you rule out unexpected stoppages with a global network and optimum logistics chains.

[www.siemens.com/lowvoltage/technical-support](http://www.siemens.com/lowvoltage/technical-support)

### Training



Extend your lead – with practise-related know-how straight from the manufacturer.

[www.siemens.com/lowvoltage/training](http://www.siemens.com/lowvoltage/training)

### Specification texts

You can obtain qualified, free support to help you produce specifications for technically equipping non-residential and industrial buildings at

[www.siemens.com/specifications](http://www.siemens.com/specifications)

## Comprehensive support from A to Z

## Overview

## Product information

|                   |                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Website</b>    | Fast, targeted information on low-voltage power distribution:<br><a href="http://www.siemens.com/lowvoltage">www.siemens.com/lowvoltage</a>                         |
| <b>Newsletter</b> | Always up to date about our trend-setting products and systems:<br><a href="http://www.siemens.com/lowvoltage/newsletter">www.siemens.com/lowvoltage/newsletter</a> |

## Product information/product &amp; system selection

|                                        |                                                                                                                                                                                                |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Information and Download Center</b> | Current catalogs, customer magazines, brochures, demo software and promotion packages:<br><a href="http://www.siemens.com/lowvoltage/infomaterial">www.siemens.com/lowvoltage/infomaterial</a> |
| <b>Industry Mall</b>                   | Comprehensive information and order platform for the Siemens Industry Basket:<br><a href="http://www.siemens.com/lowvoltage/mail">www.siemens.com/lowvoltage/mail</a>                          |

## Product &amp; system engineering

|                                          |                                                                                                                                                                                                            |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SIMARIS software tools</b>            | Support in planning and configuration the electrical power distribution:<br><a href="http://www.siemens.com/simaris">www.siemens.com/simaris</a>                                                           |
| <b>ALPHA SELECT engineering software</b> | Simple and fast configuration for distribution boards and metre cabinets with products from the Siemens Industry Basket:<br><a href="http://www.siemens.com/alpha-select">www.siemens.com/alpha-select</a> |

## Product documentation

|                                     |                                                                                                                                                                                                         |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Service &amp; Support portal</b> | Comprehensive technical information - from planning to configuration and operation:<br><a href="http://www.siemens.com/lowvoltage/support">www.siemens.com/lowvoltage/support</a>                       |
| <b>CAx Data</b>                     | Collation of commercial and technical master product data:<br><a href="http://www.siemens.com/cax">www.siemens.com/cax</a>                                                                              |
| <b>Image database</b>               | Collection of product photographs and graphics, such as dimensional drawings and internal circuit diagrams:<br><a href="http://www.siemens.com/lowvoltage/bilddb">www.siemens.com/lowvoltage/bilddb</a> |

## Product training

|                       |                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SITRAIN portal</b> | Comprehensive training program about our products, systems and engineering tools:<br><a href="http://www.siemens.com/lowvoltage/training">www.siemens.com/lowvoltage/training</a> |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Product hotline

|                          |                                                                                                                                                                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technical Support</b> | Support for all technical queries about our products:<br>E-mail: <a href="mailto:support.automation@siemens.com">support.automation@siemens.com</a><br><a href="http://www.siemens.com/lowvoltage/technical-support">www.siemens.com/lowvoltage/technical-support</a> |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Software Licenses

## Overview

**Software types**

Software requiring a license is categorized into types. The following software types have been defined:

- Engineering software
- Runtime software

**Engineering software**

This includes all software products for creating (engineering) user software, e.g. for configuring, programming, parameterizing, testing, commissioning or servicing.

Data generated with engineering software and executable programs can be duplicated for your own use or for use by third parties free-of-charge.

**Runtime software**

This includes all software products required for plant/machine operation, e.g. operating system, basic system, system expansions, drivers, etc.

The duplication of the runtime software and executable programs created with the runtime software for your own use or for use by third-parties is subject to a charge.

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| 8HP9        | 18/42 ... 43, 18/45 ... 47                                                        | N               | N  |
| <b>8J</b>   |                                                                                   |                 |    |
| 8JH1 3      | 18/39                                                                             | N               | N  |
| 8JH1 4      | 18/22, 18/39                                                                      | N               | N  |
| 8JH4 0      | 18/40                                                                             | N               | N  |
| 8JH4 1      | 18/13, 18/16, 18/35                                                               | N               | N  |
| 8JH4 2      | 18/31                                                                             | N               | N  |
| 8JK1        | 18/22, 18/39                                                                      | N               | N  |
| 8JK3        | 18/16, 18/35 ... 36                                                               | N               | N  |
| 8JK4        | 18/41                                                                             | N               | N  |
| <b>8M</b>   |                                                                                   |                 |    |
| 8MF4 900    | 16/6                                                                              | N               | N  |
| 8MF4 901    | 16/6                                                                              | N               | N  |
| 8MF4 902    | 16/6                                                                              | N               | N  |
| 8MF4 903    | 16/7                                                                              | N               | N  |
| 8MF4 904    | 16/6                                                                              | N               | N  |
| 8MF4 905    | 16/6                                                                              | N               | N  |
| 8MF4 906    | 16/6                                                                              | N               | N  |
| 8MF4 908    | 16/6                                                                              | N               | N  |
| 8MF5        | 16/7                                                                              | N               | N  |
| 8MF9        | 16/7                                                                              | N               | N  |
| 8MR2 12     | 16/16                                                                             | N               | N  |
| 8MR2 13     | 16/15                                                                             | N               | N  |
| 8MR2 140-0  | 16/16                                                                             | EAR99H          | N  |
| 8MR2 140-1  | 16/16                                                                             | EAR99H          | N  |
| 8MR2 140-2A | 16/16                                                                             | EAR99H          | N  |
| 8MR2 140-2B | 16/16                                                                             | N               | N  |
| 8MR2 140-3A | 16/16                                                                             | EAR99H          | N  |
| 8MR2 140-3B | 16/16                                                                             | EAR99           | N  |
| 8MR2 140-3C | 16/17                                                                             | N               | N  |
| 8MR2 140-3D | 16/17                                                                             | N               | N  |
| 8MR2 140-4A | 16/16                                                                             | EAR99H          | N  |
| 8MR2 140-4B | 16/16                                                                             | N               | N  |
| 8MR2 140-5  | 16/17                                                                             | N               | N  |
| 8MR2 140-6  | 16/16                                                                             | N               | N  |
| 8MR2 150-0  | 16/16                                                                             | N               | N  |
| 8MR2 150-2  | 16/17                                                                             | N               | N  |
| 8MR2 150-3  | 16/17                                                                             | N               | N  |
| 8MR2 170-1A | 16/19                                                                             | N               | N  |
| 8MR2 170-1B | 16/19                                                                             | N               | N  |

# Appendix

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| 8MR2 170-2B  | 16/18                            | N               | N  |
| 8MR2 170-4   | 16/20                            | N               | N  |
| 8MR2 171     | 16/18                            | N               | N  |
| 8MR2 172     | 16/19                            | N               | N  |
| 8MR2 18      | 16/20                            | N               | N  |
| 8MR2 19      | 16/12                            | N               | N  |
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| 8MR6 3       | 16/12                            | N               | N  |
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| 8MR6 5       | 16/10 ... 11                     | N               | N  |
| <b>8U</b>    |                                  |                 |    |
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| 8US1 922     | 18/31                            | N               | N  |
| 8US1 923     | 18/31                            | N               | N  |
| <b>8W</b>    |                                  |                 |    |
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| 8WA2 86      | 18/13, 18/16, 19/9, 19/14, 19/22 | N               | N  |
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| 8WC          | 18/32                            | N               | N  |
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| 8WH1 001-OAM | 19/7                             | N               | N  |
| 8WH1 001-OB  | 19/11                            | N               | N  |
| 8WH1 001-OC  | 19/7                             | N               | N  |
| 8WH6 001-OAF | 19/4                             | N               | N  |
| 8WH6 001-OAG | 19/5                             | N               | N  |
| 8WH6 001-OAH | 19/5                             | N               | N  |
| 8WH6 001-OB  | 19/9                             | N               | N  |
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| 8WH6 001-4   | 19/13                            | N               | N  |
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| 8WH8 110-7   | 19/19                            | N               | N  |
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| 8WH8 111-4   | 19/18                            | N               | N  |
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| 8WH9 000-1W | 19/5                                                          | N               | N  |
| 8WH9 000-3  | 19/14                                                         | N               | N  |
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# Appendix

Notes

Notes

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- the text of the Comprehensive Terms and Conditions of Sale and Delivery of Siemens AG

in the Internet under  
[www.siemens.com/automation/salesmaterial-as/catalog/en/terms\\_of\\_trade\\_en.pdf](http://www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf)

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|      |                                                                                                                                                                                                                                                                                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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